



Integrated Program Management Report (IPMR) DID Training

31 July 2012

Navy CEVM



Outline

- Overview
- Summary of changes in DID 2005
- CDRL Development
 - Required tailoring
 - Draft Navy CEVM IPMR CDRL
- Backup: Overview of 2012 IPMR DID Requirements by Format



50,000 Foot Level - Changes

- Format 3 – Additional time phasing. Baseline changes were number one item into which the Government Program Offices wanted additional visibility.
- Format 5 – Variance Analysis simplification. Contractors said analysis was the most significant cost burden.
- Format 5 – Additional integration. Enhanced government visibility in reporting on scheduling and baseline changes.
- Format 6 IMS – Added SRA requirements and tightened the content and reporting of schedule changes
- Format 7 – New time-phased cost report. Provides Government visibility into historical and future plans,

MERGED THE IMS AND CPR INTO THE IPMR



IPMR DID Overview

- IPMR DID officially released 20 June 2012
- The IPMR DID is effective 1 July 2012
- DID is applied when DFARS 252.234-7001/7002 are invoked
- Generally full IPMR is applicable for cost-plus and incentive/award contracts greater than \$20M
 - Format 6 (formerly the Integrated Master Schedule-IMS) and the associated Format 5 analysis are separable and may be applicable when EVM is not required (see section 2.8.2 for applicable formats and sections)
- Currently the CPR and IMS are referenced in 5000.02 and DAG
 - Will be updated to reflect new DID in next regular update



SIGNIFICANT CHANGES FROM 2005 DID

IN ORDER OF THE IPMR DID PARAGRAPHS



General Section

- All formats shall be submitted electronically in accordance with the DOD-approved XML schemas
- Reporting Level. The reporting level is defined consistent with MIL-STD-881 (current version in use at time of contract award), as applicable
- Human Readable. The Government may, in the CDRL, require Formats 1-4 in human readable format down to the reporting level as additional, separate submissions
- Default is Formats 1-6 monthly and Format 7 annually
- Options for hours, subcontract reports, control account level Format 1 XML



General Section

- Formats 1-6 due on the 12th working day after contractor accounting month end
 - May be tailored based on risk
- All formats contain full scope including AUW
- Common header format and content defined



Format 1

- Format is unchanged
- Negotiated Cost – Definitized changes only
- UAW – Best estimate of scope - NOT tied to NTE
 - Can never be negative
 - De-scopes reported in format 5 until removed from the PMB.
- EACs
 - Best Case most favorable conditions. No requirement to be the official contractor position
 - Worst Case least favorable conditions
 - Most likely is official contractor position. Supersedes the column 15 LRE.
 - Difference in assumptions between EACs including column 15 must be discussed in Format 5.



Format 1

- G&A and COM add/non-add and may be specified by the Government
- UB
 - Temporary, should be distributed within the next accounting month
 - May never be negative
 - Total content and changes explained in Format 5
- MR
 - May not be used to offset cost variances
 - Never negative
- OTB/OTS and Reprogramming Guidance
- Removed WBS and CCDR linkage



Format 2 Significant Changes

- Format is unchanged
- Revised all element definitions to equal format 1 (e.g. Headers, UB, MR...)

12



Format 3 Significant Changes

- Format has one change to the form: un-greyed baseline changes section
- Linked discussions of changes to format 5
- Still contains projected finish date and variance.



AMPI



Format 4 Significant Changes

- Format is unchanged
- Linked discussions of categories with Format 2, unless defined in CDRL

16



Format 5 Significant Changes

- Formal variances are limited to a total of 15 WBS Elements
- Two methods allowed for determining which variances are addressed
 - Top 15 WBS Elements approach
 - Allows for Government selection approach or a defined contractor process that covers all aspects (current, cumulative and at-complete)
- Allows contractor or government to temporarily increase the number of reported variances to cover emerging tread(s)
- Linked Formats 1-4 and 6 discussions to Format 5
 - Significant Format 6 changes. Require SRA, Health Assessment and drivers as applicable
- Requirement to reconcile Best/Worst/Most Likely EAC



Format 6 Significant Changes

- The Integrated Master Schedule (IMS) had been a separate deliverable with its own DID
 - Now merged with the CPR as Format 6 in the IPMR
 - IMS analysis requirements will be submitted as part of Format 5
- Added significant language to eliminate most needs for statement of work clarification
 - Defined minimum level of subcontractor integration
 - Reached agreement on the definition of Schedule Margin and Schedule Visibility Tasks (SVTs)
 - Required disclosing of justification for Leads, Lags and most Constraints
 - Defined minimum fields
 - Expanded when SRA is required and how it is reported



Format 6 Cont'd

- Consistency with Format 1 Addressed
 - Included “The WBS numbering system in the IMS must be consistent with the Format 1 structure.”
- Schedule Margin
 - Allowed before program events
- Critical & Driving Paths
 - Included definition that tasks with “0” or negative total float are not by default the critical path
 - Driving path and interim milestones defined (not in 2005 IMS DID)
 - Excessive constraints and incomplete, incorrect, or overly constrained logic shall be avoided



Format 6 Cont'd

- Relationships & Float
 - All non-constrained discrete tasks/activities/milestones shall have at least one predecessor and successor, except the start and end of the program or interim delivery
- Subcontractor Integration
 - Subcontractor discrete work shall be incorporated as tasks within the prime IMS at a level necessary for a realistic critical path
- Calendars
 - The IMS shall contain all calendars that define working and nonworking time periods or other information that may impact the schedule



Format 6 Cont'd

Justification – Worked with industry and Government to define cost –effective approach

- a) Requires justification of late constraints (MSP default MSO, MFO, FNLT, SNLT*)
- b) Requires justification of early constraints that are greater than 20 WD after the status date (MSP Default SNET, FNET*)
- c) Allows for a note field or a code defined in the Data Dictionary for common constraint reasons

* Different software default terms may vary



Minimum Data Fields In IMS

- Control Account/Work Package
- Subcontractor
 - Tasks that are unique to the scope of a major supplier, if any
 - Subcontractors with an EVM flowdown shall be identified separately, if applicable
- Justification of Lead, Lag, Constraint
 - This requirement may be met with a code defined in the definition table or by individual notes on each applicable task
- Earned Value Technique (EVT)
 - Identify the EV BCWP technique if the schedule is used to directly status the EVM tool
 - As a minimum, if either Level of Effort (LOE) or Planning Packages (PP) are in the schedule, they must be identified within a field



Minimum Data Fields In IMS

- Risk Mitigation Tasks , as applicable
- Critical Path and Driving Paths
- Schedule Margin. Any schedule margin planned as a task shall be clearly labeled "SCHEDULE MARGIN"
- Schedule Visibility Task (SVT). Any SVT shall be identified with the title "SVT"
- General – can be met with any method that allows for Gov't sorting and filtering



Format 7

- New requirement not in CPR DID, but similar information was previously required by the EVM Central Repository (called historical file)
- Time phased BCWS, BCWP, ACWP, ETC from contract award to completion as applicable
- Must reconcile with Format 1 BAC and EAC for the month submitted
- Due as a minimum annually, at the same time as other Formats. Recommend quarterly according to the government fiscal calendar.
- Purpose to support Government planning cycle



IPMR Guide

- PARCA intends to publish draft guide 25 July 2012
- Guide will have tailoring guidance and amplification in certain areas, with examples
- Meant to supplement and clarify, but not change, the DID content



CDRL DEVELOPMENT

ITEMS THAT MUST BE SPECIFIED



Overview

- Some items are required to be specified in the CDRL
- Other items the Government has the option to require
- Other CDRL or Government “may” DID statements are future actions that may be taken
- CEVM has provided recommendations for the required items and selected optional items recommended for Navy programs



Required Specifications for IPMR CDRL

Paragraph	Category/Description
3.5.1.5	Format 4 thresholds for changes reportable in period
3.7.1.3.6.4	SRA frequency beyond minimum IBR, OTB/OTS, SPA



Optional Specifications for IPMR CDRL

Paragraph	Category/Description
2.1.1.1	Format 1 XML level at reporting level or as low as Control Account
2.2.1	Option for separate 1-4, 5, 7 in hours XML and Human Readable
2.2.3	Option for Human Readable additional delivery, XML is standard
2.2.5	Option to remove the Native IMS Format 6 delivery
2.2.6/3.8.1	Format 7 at Format 1 Level unless defined as low as Control Account
2.5.1	Minimum monthly IPMR submission however may define more frequent
2.5.2	Format 7 minimum annually, may require more frequently
2.7	IPMR will require all scope unless specified
3.2.4.2/ 3.2.4.3	Format 1 G&A and COM reporting – Government may require non-add (To be compatible with CSDR if applicable)



Optional Specifications for IPMR CDRL

Paragraph	Category/Description
2.4/3.7.1.1. 2/3.8.2	Subcontractor IPMR formats may be required deliverable
3.7.1.3.6	SRA milestones require individual estimates for primary, secondary, tertiary driving paths
3.7.1.3.8	Any Government required fields in the IMS beyond the minimum
2.3	Security requirements may impact marking and delivery requirements
2.6.1	IPMR default delivery 12 working days, may go as late as 17
2.8.2	Format 6 IMS may be required separately
3.4.2.2	Format 3 Definition of “Significant” baseline changes in period
3.5.1	Format 4 in hours, equivalent people, total headcount
3.6.10.2.1	Format 5 Variance Analysis thresholds



Optional Specifications for IPMR CDRL

Paragraph	Category/Description
3.5.1.2	Format 4 reporting elements may differ from Format 2
3.6.10.2.4	Format 5 - An alternate method of selecting 15 WBS Variance Analysis reportable
3.6.10.2.4.1	Format 5 - Government selection of variances no later than 10 working days prior to contractor delivery date
3.6.10.2.4.6	Reduction of variances (Applicable in later phase of contract)
3.7.1.3.5.8	Government may specify current “driving path” that is reportable in the Format 6 IMS
3.7.1.3.8	Format 6 (IMS) reserved fields, if any



Tailoring the DID in the CDRL

IPMR DID	Item to be Tailored	Navy CEVM Default Recommendation
2.1.1.1	Format 1 XML Level	Control Account Level
2.2.3	Human Readable Optional	Recommend Requiring
2.4 (3.7.1.1.2 & 3.8.2)	The gov't may specify subcontractor IPMR submissions be also submitted to the gov't	Recommended
2.5.1	Formats 1-5, 6 at least monthly	Monthly
2.5.2	Format 7 at least annually	Quarterly
2.6.1	Due 12-17 WD based on complexity	12 Working Days



Tailoring the DID in the CDRL

IPMR DID	Item to be Tailored	Navy CEVM Default Recommendation
3.4.2.2	Definition of “significant” Format 3 Specific breakout and Format 5 explanation	> = 5%
3.6.10.2.1	Variance Analysis Threshold	10% and \$50K Current, 10% and \$100K Cumulative and 5% and 250K At-Complete
3.6.10.2.4.1	Contractor notification of variance pool	Previous Month
3.6.10.2.4.1	Government optional selection of 15 WBS Variances to report	Previous Month



Tailoring the DID in the CDRL

IPMR DID	Item to be Tailored	Navy CEVM Default Recommendation
3.6.10.2.4.2	Contractor Identification of Variances	This identification process may be changed by mutual consent without cost or contractual change.
3.7.1.1.2	Subcontractor IMSs reported to Gov't	Recommend
3.8.2	Subcontractor Format 7 to the Gov't	Recommend
3.4.5/ 3.5.1.4	Format 3 and 4 reporting periods	columns 4-9 are months beyond the current period; columns 10-13 are defined as quarters or fiscal years, and column 14 shall be the remainder of the contractual period of performance to reconcile with the totals.



Tailoring the DID in the CDRL

- Options in DID not included in CEVM Sample CDRL

IPMR DID	Item to be Tailored	Navy CEVM Default Recommendation
2.2.1	Hours Optional FMTs 1-4, 5 and 7	Optional
2.3	Special security requirements	As applicable
2.2.5	Option to not receive native Format 6 electronic file	Recommend receiving native file
2.2.6/3.8.1	Options for Format 7 XML level	Not required if Format 1 is at control account level – recommend adding if CEVM recommendation for Format 1 not accepted
2.7	IPMR includes total scope unless specified	Recommend IPMR includes full scope



Tailoring the DID in the CDRL

- Options in DID not included in CEVM Sample CDRL

IPMR DID	Item to be Tailored	Navy CEVM Default Recommendation
2.8.2	Separate IMS Requirement	As applicable when DFAR not required – See Navy Contract Requirements Checklist for applicability
3.2.4.2/ 3.2.4.3	Format 1 WBS elements include/not include G&A and COM	Contractor discretion
3.5.1	Format 4 structure = Format 2 ?	Default, option to change
3.6.10.2.4	Option to specify alternate method of selecting 15 variances other than top 3 VARs per current/cum CV/SV and VAC	Recommend alternate method not be specified – options exist already in DID for Gov't selection



Tailoring the DID in the CDRL

- Options in DID not included in CEVM Sample CDRL

IPMR DID	Item to be Tailored	Navy CEVM Default Recommendation
3.6.10 .2.4.6	Options to reduce variance analysis reportable	Recommend applying in later stages of contract
3.7.1.3.6	SRA individual estimates for primary, secondary and tertiary driving paths	Define in direction for each SRA and not CDRL
3.7.1.3.8	Any IMS fields the Gov't requires in addition to DID requirements	Optional



NAVY CEVM SAMPLE CDRL



NAVY CEVM SAMPLE CDRL

- Navy CEVM recommendations are contained in a sample 1423-1 available on the website
 - CDRL may be copied directly and applied if the program agrees with CEVM recommendations
 - Add any options required unique to the contract.



NAVY CEVM SAMPLE CDRL

- The Contractor shall provide monthly IPMRs per DID DI-MGMT-81861 except as modified per the following:
- 1. Block 12 - Date of First Submission. The first submission of Formats 1-6 is due within 12 working days after the end of the second full accounting period following Authorization to Proceed (ATP).
- 2. Block 13 - Date of Subsequent Submissions: Subsequent submissions containing all formats (Formats 1 through 6) shall be provided within 12 working days after the close of the contractor's monthly accounting period. Format 7 is due quarterly within 12 working days after the contractor's monthly accounting period in the months of Dec, Mar, Jun & Sep.
- 3. Block 14 - Distribution and addresses: COMPLETE FOR EACH CONTRACT including CR ACAT I-III.
- 4. Submission Formats and Instructions:
- 4.1 All formats shall be submitted electronically in accordance with the DOD-approved XML schemas located in the EVM Central Repository (EVM-CR) . Refer to the DCARC EVM Website for a link to the EVM-CR <http://dcarc.cape.osd.mil/EVM>
- 4.2. Cost XML Guidelines. Formats 1-4 shall be submitted using the DoD-approved Cost XML guideline and schema. Formats 1-4 shall be submitted in whole units (no decimals) in the XML. Format 1 WBS data in XML shall be required down to the control account level. The Cost XML shall also contain the WBS and OBS structures from the control account level to the total program level



NAVY CEVM SAMPLE CDRL (Con't)

- 4.3. IMS XML Guidelines. Format 6 shall be submitted using the DoD-approved IMS XML guideline and schema.
- 4.4. Time-phased Cost XML Guideline. Format 7 shall be submitted using the DoD-approved Time-Phased Cost XML Guideline and schema.
- 4.5 All IPMR files must be electronically forwarded to the central repository at the DCARC website at <http://dcarc.cape.osd.mil/EVM>
- 4.6 Formats 5 and 6 shall also be submitted in contractor native format. Formats 1-4 shall additionally be provided in human readable formats such as a word processor, spreadsheet or PDF file.
- 4.7 Subcontractors with DFAR 7002 requirement shall report Format 1-7 to the Government as specified in Block 14.
- 4.8 Method of compression: HOLD FOR ZIP method the CR will require. Non-ACAT programs can also use it
- 4.9 Digital Signatures: Hold for tool that will use CAC or ECA certificate to digitally sign the submission.



NAVY CEVM SAMPLE CDRL (Con't)

- Block 16 - Remarks:
- a. Format 1 Instructions: Contract Work Breakdown Structure (CWBS) elements shall be reported in accordance with MIL-STD-881. The human readable Format 1 shall be reported at the level specified in MIL-STD-881, as tailored in the contract. This level is also known as the "Reporting Level".
- b. Format 2 Instructions: Use organizational categories, e.g., Integrated Product Team (IPT) or functional organizations including each subcontractor with EVMS flowdown requirements (DFARs 252.234-7002) and each major vendor separately as an add-non-add item.
- c. Format 3 Instructions: Significant differences (values exceeding +/- 5%) between the Performance Measurement Baseline (PMB) at the beginning and end of each specified period by month and in total shall be individually listed and explained in Format 5.
- d. Format 3 and 4 time periods shall be consistent. Formats 3 and 4 columns 4-9 are months beyond the current period; columns 10-13 are defined as GFY quarters or fiscal years, and column 14 shall be the remainder of the contractual period of performance to reconcile with the totals.



NAVY CEVM SAMPLE CDRL (Con't)

- e. Format 4 Instructions:
 - (1) The contractors estimate-to-complete projections shall be used for time phasing equivalent staff months for each organizational category specified in Format 2 and include staffing for effort performed by significant Intercompany Work Authorizations.
 - (2) Significant changes that require explanations in Format 5 are those that change the value of the projected total staff-months at completion of any organizational or functional category by more than +/-5%.
 - (3) The reportable unit in Format 4 shall be in “equivalent months”.
- f. Format 5 Instructions
 - (1) The reporting level is MIL-STD 881, as tailored in the contract.
 - (2) The thresholds are (may be adjusted based on scope of contract, however some threshold must be specified)
 - a) \$50K and 10% for current period cost or schedule variances
 - b) \$100K and 10% for cumulative cost or schedule variances
 - c) \$250K and 5% for at-complete variances.
 - d) Narrative explanations required and variance thresholds will be reviewed periodically, and may be adjusted by contract modification with no change in contract price.
 - (3) Monthly the contractor will notify the Government which reportable WBSs exceeded the threshold no later than the 15th working day after the accounting close.



NAVY CEVM SAMPLE CDRL (Con't)

- (4) The government may notify the contractor which 15 variances are reportable in the current period no later than the 2nd working day after accounting close.
- (5) Without the Government direction; the contractor shall report the top three current month, cumulative, and at complete variances. A total of 15 WBS elements are reported as applicable. This identification process may be changed by mutual consent without cost or contractual change.
- (6) The contractor or the Government may identify additional variances to report over the 15 to cover emerging trends. Items shall be reviewed monthly to see if still required, the intent of the requirement is to be temporary in nature.
- (7) Variance Analysis Narratives. All reportable WBS variances report shall
 - a) Adequately address the root cause of the variance
 - b) Adequately discuss any schedule variance in terms of float and the impact to the program critical path, if any.
 - c) The narrative shall be quantitative and explain the causes that account for at least 70% of the variance exceeding the threshold
- (8) If there are no changes to the reportable element problem analysis, expected impacts, or corrective action status then specify, "no changes since the last reported analysis" and reference the IPMR date when the narrative was initially reported.



NAVY CEVM SAMPLE CDRL (Con't)

- g. Format 6 Instructions
 - (1) The IMS is also submitted in the contractors native schedule format including the calendar(s).
 - (2) The IMS shall include all discrete work. Subcontractors with EVM flowdown shall be incorporated as a minimum at level 3 with sufficient detail to develop a realistic critical path.
 - (3) The Schedule Risk Assessment (SRA) is reportable
 - (a) At least annually or whenever the contractor internally requires an SRA to be performed
 - (b) Additionally before an Integrated Baseline Review or approval of an Over-Target Baseline/Over-Target Schedule, and/or Single Point Adjustment.
 - (4) The driving path reportable in Format 5 is defined as the next contract milestone not yet completed (e.g. SSR, PDR, CDR, float off etc.)
- h. Format 7 supplemental instructions - None



NAVY CEVM IPMR CDRL – Available in Proper Format

CONTRACT DATA REQUIREMENTS LIST (1 Data Item)					Form Approved OMB No. 0704-0188		
<p>The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.</p>							
A. CONTRACT LINE ITEM NO.		B. EXHIBIT A		C. CATEGORY: TDP <input checked="" type="checkbox"/> TM <input type="checkbox"/> OTHER <input type="checkbox"/>			
D. SYSTEM/ITEM			E. CONTRACT/PR NO.		F. CONTRACTOR		
1. DATA ITEM NO. XXX	2. TITLE OF DATA ITEM Integrated Program Management Report (IPMR)				3. SUBTITLE Page 1 of 2		
4. AUTHORITY (Data Acquisition Document No.) DI-MGMT-81861			5. CONTRACT REFERENCE SOW Para XXzz		6. REQUIRING OFFICE		
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED NA	10. FREQUENCY MTHLY	12. DATE OF FIRST SUBMISSION SEE 16	14. DISTRIBUTION			
8. APP CODE NA		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION SEE 16	a. ADDRESSEE		b. COPIES	
						Draft	Final
						Reg	Repro
16. REMARKS The Contractor shall provide monthly IPMRs per DID DI-MGMT-81861 except as modified per the following: 1. Block 12 - Date of First Submission. The first submission of Formats 1-6 is due within				See Block 16*			



References

1. NAVY CEVM Website:
https://acquisition.navy.mil/home/acquisition_one_source/cevm
2. PARCA Website: <http://www.acq.osd.mil/parca/>
3. PARCA EVM Website: <http://www.acq.osd.mil/evm/>
4. PARCA EVM Issue & Interpretation: <http://www.acq.osd.mil/evm/ir/index.shtml>
5. EVM-CR Website: <http://dcarc.cape.osd.mil/EVM/EVMOverview.aspx>
6. DAU EVM Community Of Practice (COP) Website:
<https://dap.dau.mil/cop/evm/Pages/default.aspx>
7. DFARS
 - Notice of Earned Value Management System (Apr 2008):
<http://www.acq.osd.mil/dpap/dars/dfars/html/current/252234.htm#252.234-7001>
 - Earned Value Management System (May 2011):
<http://www.acq.osd.mil/dpap/dars/dfars/html/current/252234.htm#252.234-7002>
 - Contractor Business Systems (May 2011):
<http://www.acq.osd.mil/dpap/dars/dfars/html/current/252242.htm#252.242-7005>



IPMR Guide

IPMR DID Clarification



IPMR Guide Contents

- Section 1 – Applying the IPMR DID
- Section 2 – Tailoring the IPMR DID
- Section 3 – IPMR DID Clarifications



WBS and MIL-STD 881

- EVMSG concerned with DID wording

The submission of Format 1 data shall utilize a product-oriented WBS at the level established by tailoring the appropriate MIL-STD-881 (current version in use at time of contract award) appendix by the Program Office and approved by an office(s) designated by OSD policy. WBS levels below MIL-STD-881 are defined by the contractor.

- Question: What about contracts that start at level 4 of the 881?

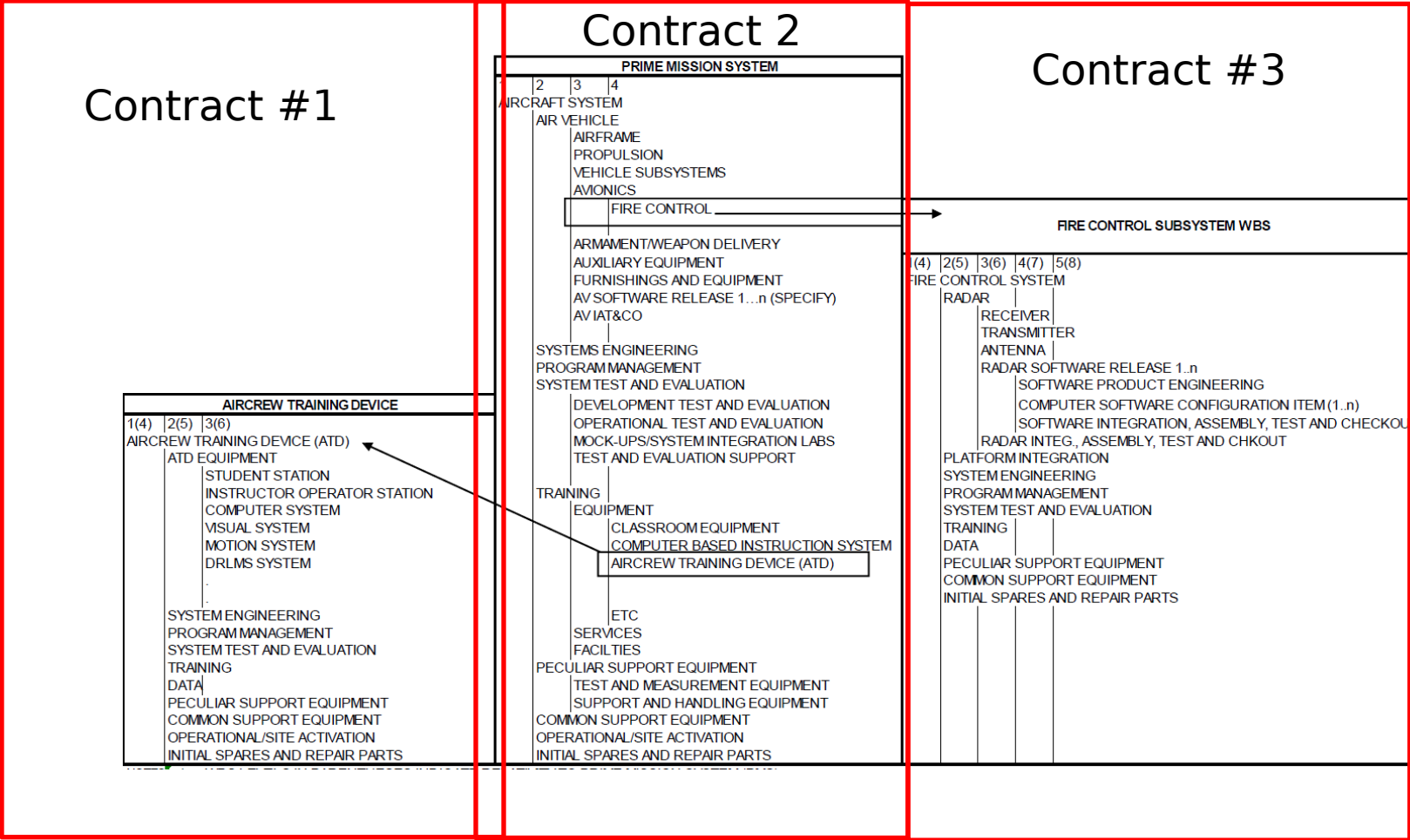


WBS and MIL-STD 881

- The steps to develop a contract WBS within an overall program structure:
 - Determine the program Appendix that is applicable (e.g Aircraft, Sea, Space)
 - Find the WBS level that describes the contract top level (e.g. Aircraft System or Fire Control.)
 - Are there three to four levels in the appendix below this level?
 - If not, use Appendix B and L to define additional levels.
- Stop developing the contract level WBS when three to four WBS levels have been defined. Allow the contractor to define additional levels.



WBS and MIL-STD 881





WBS and MIL-STD 881

Appendix B

MIL-STD-881C APPENDIX B

B.3 WORK BREAKDOWN STRUCTURE LEVELS

WBS #	Level 1	Level 2	Level 3	Level 4
1.0	Electronic System			
1.1		Prime Mission Product (PMP) 1...n (Specify)		
1.1.1			PMP Subsystem 1...n (Specify)	
1.1.1.1				PMP Subsystem Hardware 1...n
1.1.1.2				PMP Subsystem Software Release 1...n
1.1.1.3				Subsystem Integration, Assembly, Test and Checkout
1.1.2			PMP Software Release 1...n (Specify)	
1.1.2.1				Software Product Engineering
1.1.2.2				Computer Software Configuration Item (CSCI) 1...n
1.1.2.3				Subsystem Integration, Assembly, Test and Checkout
1.1.3			PMP Integration, Assembly, Test and Checkout	
1.2		Platform Integration, Assembly, Test and Checkout		
1.3		System Engineering		
1.4		Program Management		
1.5		System Test and Evaluation		
1.5.1			Development Test and Evaluation	



WBS and MIL-STD 881

Appendix L

MIL-STD-881C APPENDIX L

L.3 DEFINITIONS OF COMMON ELEMENTS

L.3.1 Integration, Assembly, Test and Checkout. In those instances in which an integration, assembly, test, and checkout element is used (Appendices A through K), this element includes all effort of technical and functional activities associated with the design, development, and production of mating surfaces, structures, equipment, parts, materials, and software required to assemble the Level 3 equipment (hardware/software) elements into a Level 2 mission equipment (hardware/ software) as a whole and not directly part of any other individual Level 3 element. (Reference Section L.4.1 for space systems application)



AUW/UB Clarification

- New Scope: AUW and UB until distributed
- De-Scope: Format 5 then UB and AUW when removed from time phased PMB.
- Negative AUW and UB prohibited
- Why? UB is undistributed. De-scope is over-distributed. Scope and budget must be transferred together.



AUW/UB Clarification

- Value of AUW clarified
 - Scope is the driver and not the NTE
 - Two examples
 - Authorization for ECP 1234 subject to a Not-To-Exceed \$22M; where ECP is \$100M at cost. No scope was mentioned other than a general reference to the ECP. AUW is increased \$100M consistent with the ECP total scope.
 - Authorization for ECP 1234 long lead parts WBS XYZ only, subject to a Not - To - Exceed of \$2M; where the long lead was proposed at \$2M. AUW is increased \$2M, consistent with the long lead authorization.
- Discussed MR component may be included in de-scope situation



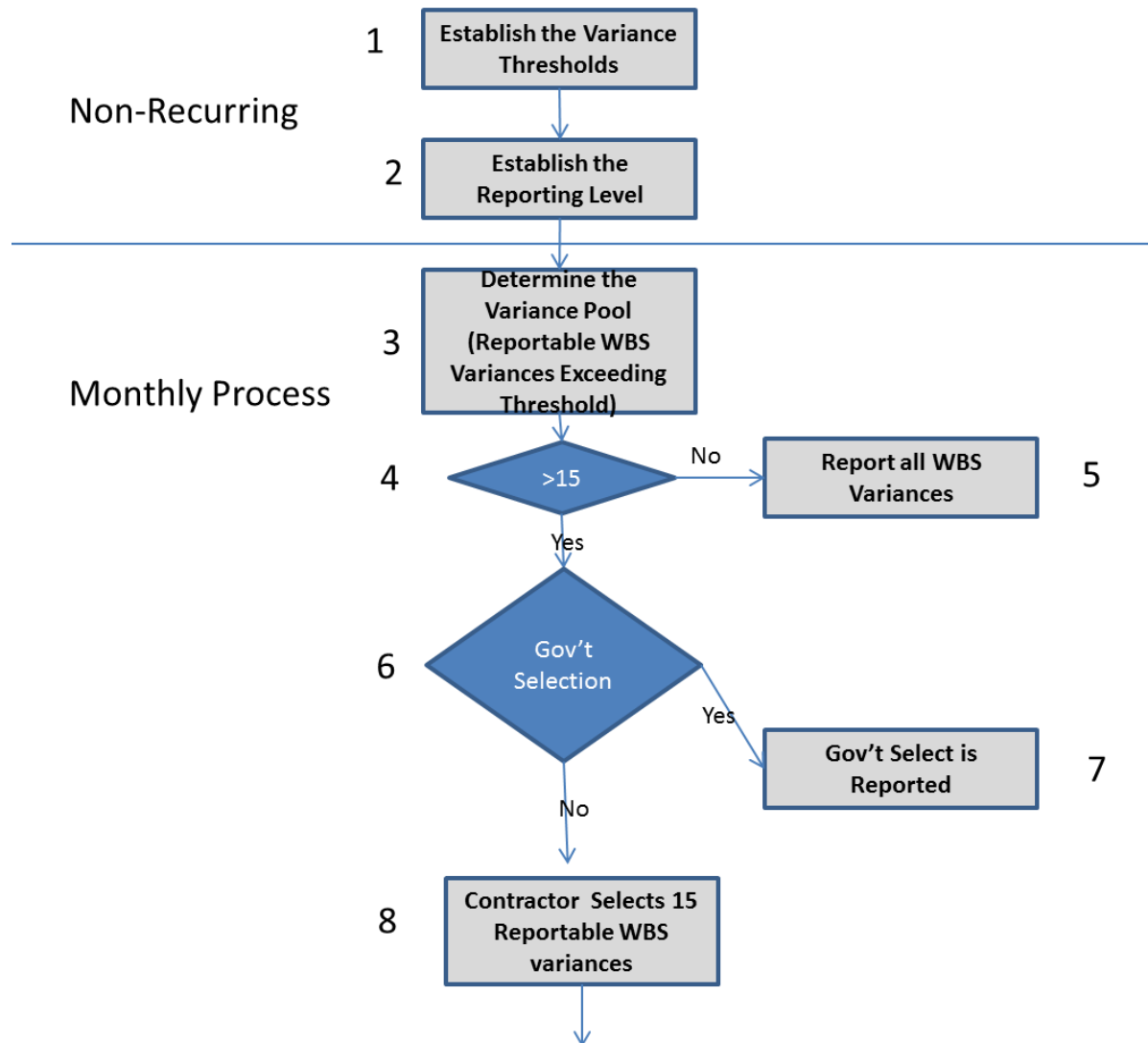
Variance Analysis 50,000 Foot Level

- 15 WBS Element Limit
 - Focus on the key variance and quality write-up
- Government Flexibility to determine 15 based on risk criteria at their discretion
- Contractor formula based determination
 - Avoid subjective
 - Cover Cost/Schedule and Current/Cumulative/At-Complete aspects
 - Tailorable to cover program phase or emphasis

Government Driven Variance Analysis Process

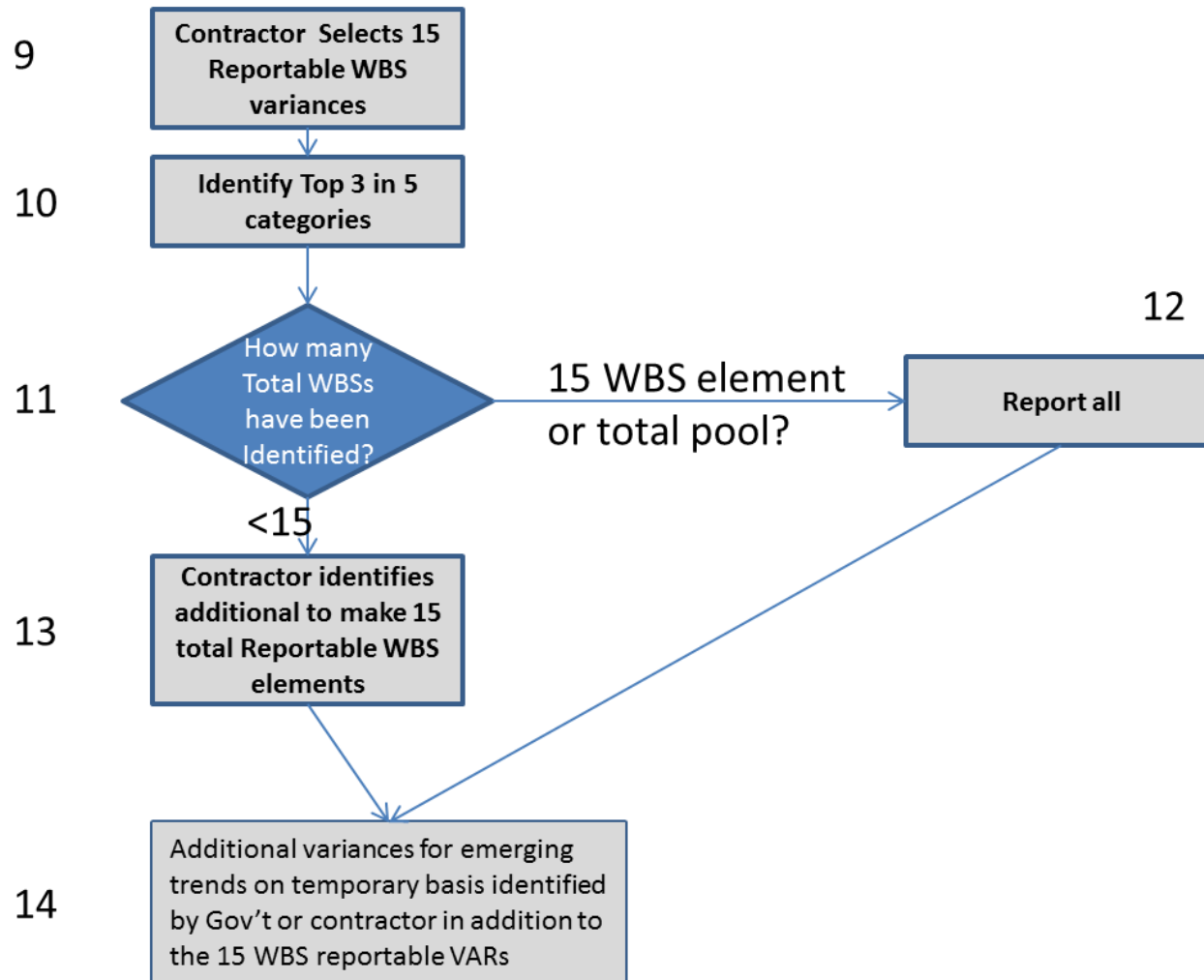


Variance Analysis





Variance Analysis

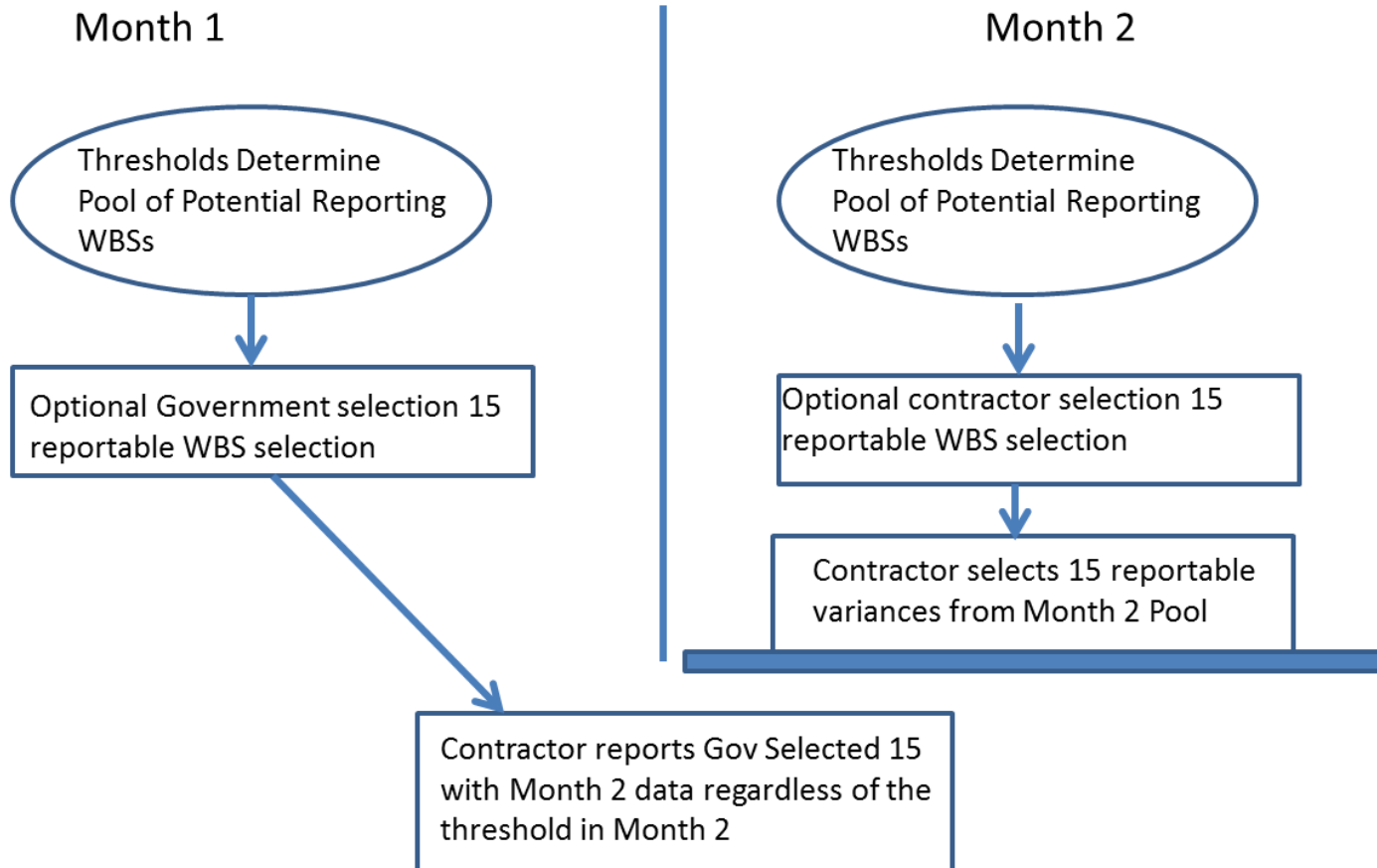




Variance Analysis

Option if Government Selection

As Of Month 2





Variance Analysis Contents

- 1) Contract Summary
- 2) Formal Reprogramming Analysis
- 3) EAC Analysis
- 4) UB Analysis
- 5) MR Analysis
- 6) IMS Discussion
- 7) Format 3 Discussion
- 8) Format 4 Discussion
- 9) Cost and Schedule Variance Analysis
- 10) Supplemental Discussions.



Clarification Regarding Minimum Format 6 Fields

- It is not the intent of the DID to dictate to the contractor how to compose their schedule. However, the title or field language requirements in the DID allow the Government to filter or sort the data easily to find the required information. Fields may be combined or placed within the task name structure as long as this requirement is met. Should the task name structure or combination approaches be used, the Data Dictionary shall clearly define the components of the structure and how to filter or sort this field.



Clarification Regarding Schedule Margin

- Schedule margin, if used, is typically established at the time of baseline establishment and set with the Baseline and Forecast duration equal.
- A baseline schedule without Schedule Margin typically is not achievable.
- The Schedule Margin duration may be changed to remove the negative float from within the critical/driving path.
- Schedule Margin cannot have successor logic ties to discrete work, either directly or indirectly.



Backup

Complete Overview of IPMR DID

Contains both old and new content

**Purpose - For those not familiar with
the 2005 IMS and CPR DIDs**



General Section

- All formats shall be submitted electronically in accordance with the DOD-approved XML schemas
- Reporting Level. The reporting level is defined consistent with MIL-STD-881 (current version in use at time of contract award), as applicable
- Human Readable. The Government may, in the CDRL, require Formats 1-4 in human readable format down to the reporting level as additional, separate submissions
- Default is Formats 1-6 monthly and Format 7 annually
- Options for hours, subcontract reports, control account level Format 1



General Section

- Formats 1-6 due on the 12th working day after contractor accounting month end. May be tailored based on risk.
- All formats contain full scope including AUW
- Common header format and content defined



Format 1

- Negotiated Cost – Definitized changes only
- UAW – Best estimate of scope NOT tied to NTE. Can never be negative. De-scopes reported in format 5 until removed from time-phased PMB.
- EACs
 - Best Case most favorable conditions. Not linked to official Ktr position
 - Worst Case least favorable conditions
 - Best Case most likely and official contractor position Supersedes the column 15 LRE
 - Difference in assumptions between EACs including column 15 must be discussed in Format 5



Format 1

- G&A and COM add/non-add and may be specified by the Government
- UB
 - Temporary, within next accounting month
 - May never be negative
 - Total content and changes explained in Format 5
- MR
 - Not use for cost variances
 - Never negative
- OTB/OTS and Reprogramming Guidance



Format 2

- Format 1 requirements by organization instead of WBS
- Include subcontractors and material if applicable
- UB
 - Temporary, within next accounting month
 - May never be negative
 - Total content and changes explained in Format 5
- MR
 - Not use for cost variances
 - Never negative
- OTB/OTS and Reprogramming Guidance



Format 3

- Unique items
 - Contains Total Allocated Budget and the difference which typically indicates an Over-Target Baseline (OTB)
 - Projected finish date and variance. Linked to Format 6 projection
 - Time Phased Baseline Costs
 - Performance Measurement Baseline (PMB) beginning
 - Significant baseline (PMB) changes in the month
 - PMB at end of period – must reconcile with beginning of period and changes made during the month



Format 4

- Unique items
 - Contains time phased resources
 - Normally uses labor categories from Format 2
 - Reported in equivalent people (hours divided by contractor accounting calendar total hours in the month)
 - Allows comparing contract reports



Format 5 Content

- 1) Contract Summary
- 2) Formal Reprogramming Analysis
- 3) EAC Analysis
- 4) UB Analysis
- 5) MR Analysis
- 6) IMS Discussion
- 7) Format 3 Discussions
- 8) Format 4 Discussions
- 9) Cost and Schedule Variance Analysis
- 10) Supplemental Discussions.



Format 5 Content

1) Contract Summary

- Contains significant changes that could impact technical, schedule, or cost objectives

2) Formal Reprogramming Analysis

- Discuss the Authorization, Reason, Mechanics implemented

3) EAC Analysis – Explain the assumptions, methodologies between Best/Worst/ and Most Likely EACs

4) UB Analysis – Explain the content of the UB balance and changes within the reporting period

5) MR Analysis – Explain the sources and uses of MR changes and the WBS elements allocated as applicable



Format 5 Content

6) IMS Discussion

- Top 3 Critical and Top 3 Driving Paths
- Total Contract Baseline Variance
- Changes between the Baseline and Forecast duration of Schedule Margin
- Changes to the Task Activity Codes or Data Dictionary
- Internal Schedule Health Analysis results

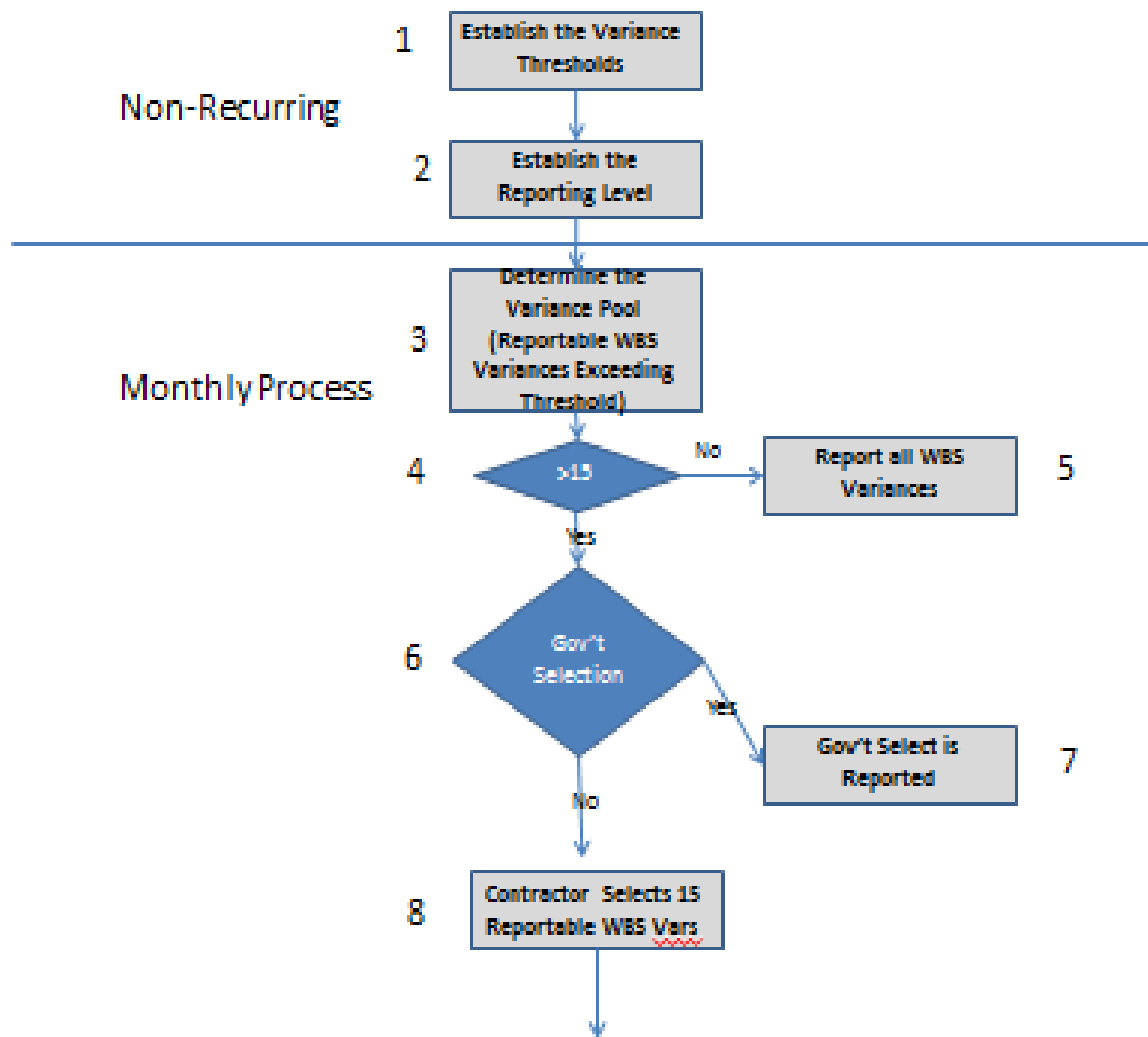


Format 5 Content

- 7) Format 3 Discussions – Significant changes to time-phasing or totals
- 8) Format 4 Discussions – Significant changes to time-phasing or totals
- 9) Cost and Schedule Variance Analysis

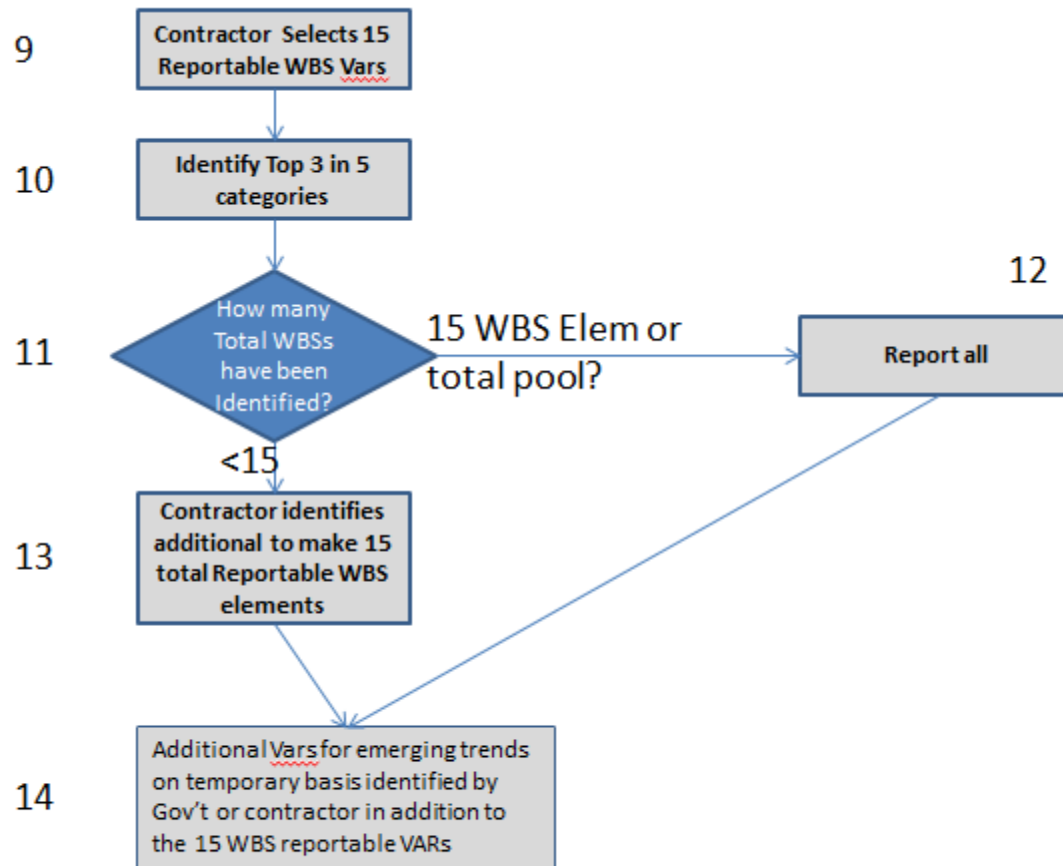


Variance Analysis





Variance Analysis

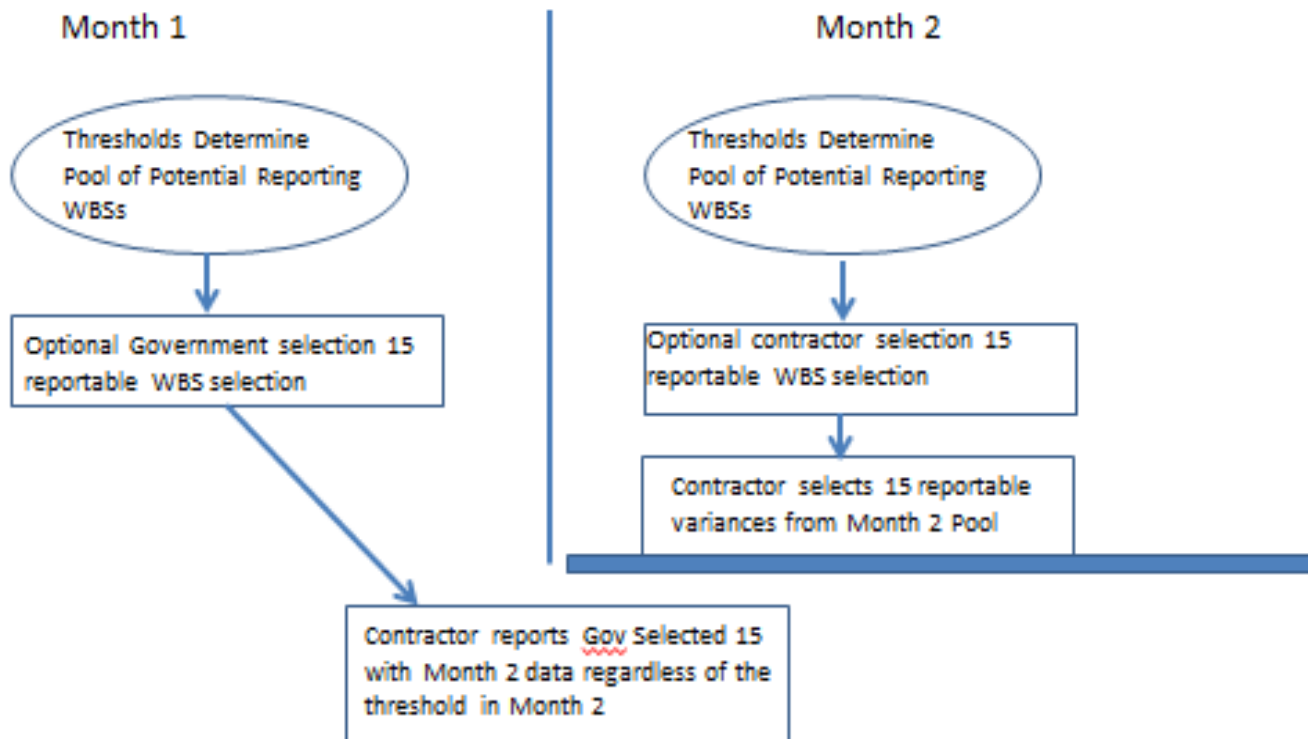




Variance Analysis

Option if Government Selection

As Of Month 2





Format 5 Content

10) Supplemental Discussions

- IBR Dates completed or proposed in next 6 months
- Schedule Risk Assessment (SRA) results in past month
 - Assumptions, results, actions, and impact on EAC
- Contractual De-scopes, if any. Discuss how the de-scope is reported
- G&A and COM Specify if cost are included or are reference



Format 6 Requirements

- All tasks consistent with all authorized work
- Subcontractors or Production discreet work incorporated at a level necessary to insure a realistic critical path.
- Allow for Government to receive subcontractor IMS directly
- Statused consistent with Format 1 period
- Requires vertical and horizontal traceability
- Contains the WBS consistent with Format 1
- Fields and data to access the information by WBS and OBS
- Contain all calendars used in the IMS



Format 6 Requirements

- LOE optional however if in IMS must be clearly identified and not linked with discreet work
- Unique activity titles
- Non-start/end/constrained/Interim delivery discrete task must have a logical predecessor and successor
- SRA requirements 1) As part of IBR, 2) When completing OTB/OTS, 3) When completing a Single Point Adjustment



Minimum Data Fields In IMS

- **Control Account/Work Package.**
- **Subcontractor.** Tasks that are unique to the scope of a major supplier, if any. Subcontractors with an EVM flowdown shall be identified separately, if applicable.
- **Justification of Lead, Lag, Constraint.** This requirement may be met with a code defined in the definition table or by individual notes on each applicable task.
- **Earned Value Technique (EVT).** Identify the EV BCWP technique if the schedule is used to directly status the EVM tool. As a minimum, if either Level of Effort (LOE) or Planning Packages (PP) are in the schedule, they must be identified within a field.
- **Risk Mitigation Tasks , as applicable.**
- **Critical Path and Driving Paths.**
- **Schedule Margin.** Any schedule margin planned as a task shall be clearly labeled “SCHEDULE MARGIN.”
- **Schedule Visibility Task (SVT).** Any SVT shall be identified with the title “SVT.”

General - can be met with any method that allows for Gov't sorting and filtering.



Format 6 Requirements

- SVTs - Label, no resources. Must be non-PMB tasks
- Leads are “discouraged”
- Leads and lags if any must be justified
- Constraints (Effect varies by Tool and Option)
 - All constraints impacting “late” dates require justification
 - All constraints impacting “early” beyond 20 WD from current period require justification
- Schedule Margin
 - No resources
 - Last activity or gap between contract event or end item delivery
 - Labeled Schedule Margin and changes in duration explained in Format 5



Format 6 Requirements

- Task/Activity Codes and Data Dictionary
 - All contractor defined fields, definitions, and code structures Submitted with first IMS and update as required



Format 7 Requirements

- Historical and future time phased hour/cost reporting by Format 1 WBS
- Subcontractors data is included at the level integrated by the Prime
- Data reported: BCWS, BCWP, ACWP, and ETC by month
- Award to completion as applicable
- Reported annually as a minimum
- Reconciles with BAC/EAC as reported in format 1 for the same reporting month
- Electronic submission only